

**What is claimed is:**

1. A light branching apparatus, comprising:
  - an optical splitter which splits an optical signal for a plurality of channels on a first optical fiber into at least a first optical channel signal on a first channel of a second optical fiber and a plurality of second optical channel signals on a plurality of second channels of a third optical fiber;

10 a first wavelength dispersion compensator which is provided for said first channel and compensates wavelength dispersion of said first optical channel signal due to said optical splitter.

2. The light branching apparatus according to  
claim 1, further comprising:

a second wavelength dispersion compensator which is provided for said plurality of second channels and compensates wavelength dispersion of said plurality of second optical channel signals due to said optical splitter.

3. The light branching apparatus according to  
claim 1, wherein said first wavelength dispersion  
compensator compensates wavelength dispersion of said  
first optical channel signal due to said second  
5 optical fiber, in addition to "said wavelength

dispersion of said first optical channel signal due to said optical splitter.

4. The light branching apparatus according to claim 3, wherein said first wavelength dispersion compensator compensates said wavelength dispersion of said first optical channel signal due to said second optical fiber by difference in length between said second optical fiber and said third optical fiber on which said first optical channel signal is selectively propagated.

5. The light branching apparatus according to claim 4, further comprising:

an optical switch which switches a channel from one of said plurality of second channels to said first channel.

6. The light branching apparatus according to claim 1, further comprising:

said third wavelength dispersion compensator which is provided for said first channel and compensates wavelength dispersion of said first optical channel signal due to said second optical fiber.

7. The light branching apparatus according to

claim 1, further comprising:

    said fourth wavelength dispersion compensator  
    which is provided for a third channel of said second  
5   optical fiber and compensates wavelength dispersion of  
    a third optical channel signal inputted to said light  
    branching apparatus due to said second optical fiber.

8.   The light branching apparatus according to  
    claim 1, wherein said plurality of optical channel  
    signals are compensated in units of channels, and said  
    first wavelength dispersion compensator includes at  
5   least a first wavelength dispersion compensating  
    element for the channel of said first optical channel  
    signal.

9.   An optical communication system comprising:

    a first optical fiber connected to a first  
    station;

    a second optical fiber connected to a second  
5   station;

    a third optical fiber connected to a third  
    station; and

    a light branching apparatus, which comprises:  
        an optical splitter which splits an optical  
10   signal for a plurality of channels on said first  
    optical fiber from said first station into at least a  
    first optical channel signal on a first channel of

said second optical fiber and a plurality of second  
optical channel signals on a plurality of second  
15 channels of said third optical fiber; and

a first wavelength dispersion compensator  
which is provided for said first channel and  
compensates wavelength dispersion of said first  
optical channel signal due to said optical splitter.

10. The optical communication system according to  
claim 9, further comprising:

a second wavelength dispersion compensator  
which is provided for said plurality of second  
5 channels and compensates wavelength dispersion of said  
plurality of second optical channel signals due to  
said optical splitter.

11. The optical communication system according to  
claim 10, wherein said first wavelength dispersion  
compensator compensates wavelength dispersion of said  
first optical channel signal due to said second  
5 optical fiber, in addition to said wavelength  
dispersion of said first optical channel signal due to  
said optical splitter.

12. The optical communication system according to  
claim 11, wherein said first wavelength dispersion  
compensator compensates said wavelength dispersion of

said first optical channel signal due to said second  
5 optical fiber by difference in length between said  
second optical fiber and said third optical fiber on  
which said first optical channel signal is selectively  
propagated.

13. The optical communication system according to  
claim 12, further comprising:

an optical switch which switches a channel from  
one of said plurality of second channels to said first  
5 channel.

14. The optical communication system according to  
claim 9, further comprising:

said third wavelength dispersion compensator  
which is provided for said first channel and  
5 compensates wavelength dispersion of said first  
optical channel signal due to said second optical  
fiber.

15. The optical communication system according to  
claim 9, further comprising:

said fourth wavelength dispersion compensator  
which is provided for a third channel of said second  
5 optical fiber and compensates wavelength dispersion of  
a third optical channel signal inputted to said light  
branching apparatus due to said second optical fiber.

16. The optical communication system according to  
claim 9, wherein said plurality of optical channel  
signals are compensated in units of channels, and said  
first wavelength dispersion compensator includes at  
5 least a first wavelength dispersion compensating  
element for the channel of said first optical channel  
signal.

17. A light branching apparatus comprising:  
an optical switch which switches a transmission  
channel of a first optical channel signal on a first  
optical fiber from a first channel on a second optical  
5 fiber to a second channel on a third optical fiber;  
a wavelength dispersion compensator which  
compensates wavelength dispersion of said first  
optical channel signal due to said second optical  
fiber by difference in length between said second  
10 optical fiber and said third optical fiber.

18. A light branching apparatus, comprising:  
an optical splitter which splits at least a  
first optical channel signal from an optical signal  
for a plurality of channels on a first optical fiber  
5 to transmit onto a first channel of a second optical  
fiber; and  
a first wavelength dispersion compensator which  
is provided for said first channel and compensates

wavelength dispersion of said first optical channel  
10 signal due to said second optical fiber.

19. The light branching apparatus according to  
claim 18, further comprising:

a second wavelength dispersion compensator which is provided for a second channel of said second optical fiber, and compensates wavelength dispersion of a second optical channel signal supplied on said second channel due to said second optical fiber.

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